IN THE CLAIMS

Please amend the claims as follows:

1. (currently amended) A method of conserving power consumption in a multi-processor data processing system, comprising:

accessing, via a bus, a memory of the data processing system by respective processors of the data processing system, wherein the accessing is through a memory controller intervening between the processors and the memory, the memory controller providing each processor substantially equal access to the memory such that memory access time may be substantially independent of the respective processors, and wherein the data processing system includes an operating system;

providing, by a policy manager module of the operating system, a programmable setting enabling a user to specify, as a predetermined performance criterion, a minimum performance required to be delivered by the data processing system;

monitoring a workload of the system by a workload monitor module of the data processing system, wherein the monitoring of the workload of the data processing system includes:

triggering the workload monitoring responsive to an asynchronous event tending to indicate a change in workload, wherein the asynchronous event includes a change in availability of transaction buffers of the data processing system;

~~distributing the workload asymmetrically to the processors in the system;~~

determining, by a policy manager module, a number of processors required to process the monitored workload at a predetermined performance criterion, wherein the determining of the number of processors by the policy manager module comprises:

receiving workload information from the workload module, including a series of workload data points indicating respectively current processor cycles corresponding to loads of the data processing system at respective times in the series;
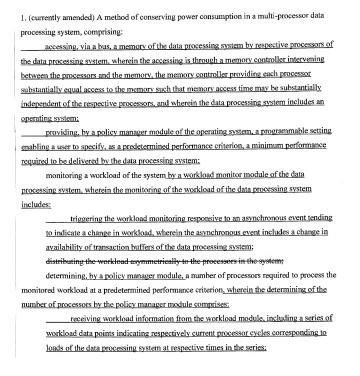
averaging the series of workload data points to smooth fluctuations in the workload data points, wherein the determining of the number of processors is responsive to the averaged series of workload data points and the predetermined performance criterion; and

selecting a processor for activation or deactivation by a resource pool module of the operating system responsive to an increase or decrease of processors indicated by the policy manager, the increase or decrease indication being responsive to the determining of the number of processors by the policy manager module, and wherein the selecting a processor for activation or deactivation includes selecting a particular processor based on the particular processor's workload;

activating or deactivating one or more processors to conform the number of active processors in the data processing system to the determined number of processors, wherein the activating or deactivating is initiated by a power control module of the operating system responsive to the selecting by the resource pool module; and

processing the workload with the active processors while maintaining the deactivated processors in a reduced power state~~, wherein deactivating a processor includes selecting a processor for deactivation based on the processor's workload~~.

2. (original) The method of claim 1, wherein determining the number of processors required comprises determining the minimum number of processors required to achieve the performance criterion.

3. (canceled)

4. (previously presented) The method of claim 1, wherein deactivating a processor includes migrating processes running on a processor selected for deactivation to another processor.

5. (original) The method of claim 4, wherein deactivating a processor further includes flushing the processor's cache memory before deactivating the processor.

6. (original) The method of claim 1, wherein deactivating a processor comprises transitioning a processor to the lowest power state supported by the processor.

7. (original) The method of claim 1, wherein monitoring the workload comprises determining the demand for CPU cycles.

8. (currently amended) The method of claim 7, wherein monitoring the workload includes determining ~~the~~ instantaneous workload periodically ~~and averaging the instantaneous workload data to obtain an average workload~~.

9. (currently amended) A data processing system including an operating system, processor, memory, and I/O means, the system including a sequence of processor executable instructions for conserving power, the instructions being stored on a computer readable medium, comprising:

    ~~computer code means for monitoring a workload of the system;~~

    instructions of a policy manager module of the operating system for providing a programmable setting enabling a user to specify, as a predetermined performance criterion, a minimum performance required to be delivered by the data processing system, wherein in the data processing system a workload monitor monitors workload, wherein the monitoring of the workload of the data processing system includes triggering the workload monitoring responsive to an asynchronous event tending to indicate a change in workload, wherein the asynchronous event includes a change in availability of transaction buffers of the data processing system, and wherein a memory of the data processing system is accessed via a bus by respective processors of the data processing system, the accessing being through a memory controller intervening between the processors and the memory, wherein the memory controller provides each processor substantially equal access to the memory such that memory access time may be substantially independent of the respective processors;

    ~~computer code means for distributing the workload asymmetrically to the processors in the system;~~

    ~~computer code means~~ instructions of the policy manager module for determining a number of processors required to process the monitored workload at a predetermined

performance criterion, wherein the determining of the number of processors by the policy manager module comprises:

receiving workload information from the workload module, including a series of workload data points indicating respectively current processor cycles corresponding to loads of the data processing system at respective times in the series;

averaging the series of workload data points to smooth fluctuations in the workload data points, wherein the determining of the number of processors is responsive to the averaged series of workload data points and the predetermined performance criterion;

selecting a processor for activation or deactivation by a resource pool module of the operating system responsive to an increase or decrease of processors indicated by the policy manager, the increase or decrease indication being responsive to the determining of the number of processors by the policy manager module;

instructions of a resource pool module of the operating system ~~computer code means~~ for activating or deactivating one or more processors to conform the number of active processors in the data processing system to the determined number of processors, wherein the activating or deactivating is initiated by a power control module of the operating system responsive to the selecting by the resource pool module, and wherein the selecting a processor for activation or deactivation includes selecting a particular processor based on the particular processor's workload; and

instructions ~~computer code means~~ for processing the workload with the active processors while maintaining the deactivated processors in a reduced power state., ~~wherein the code means for deactivating a processor includes code means for selecting a processor for deactivation based on the processor's workload.~~

10. (currently amended) The system of claim 9, wherein the ~~code means~~ instructions for determining the number of processors required comprises ~~code means~~ instructions for determining the minimum number of processors required to achieve the performance criterion.

11. (canceled)

12. (previously presented) The system of claim 9, wherein the ~~code means~~ instructions for deactivating a processor includes ~~code means~~ instructions for migrating processes running on a processor selected for deactivation to another processor.

13. (currently amended) The system of claim 12, wherein the ~~code means~~ instructions for deactivating a processor further includes ~~code means~~ instructions for flushing the processor's cache memory before deactivating the processor.

14. (currently amended) The system of claim 9, wherein the ~~code means~~ instructions for deactivating a processor comprises ~~code means~~ instructions for transitioning a processor to the lowest power state supported by the processor.

15. (currently amended) The system of claim 9, wherein the ~~code means~~ instructions for monitoring the workload comprises ~~code means~~ instructions for determining the demand for CPU cycles.

16. (currently amended) The system of claim 15, wherein the ~~code means~~ instructions for monitoring the workload includes ~~code means~~ instructions for determining ~~the~~ instantaneous workload periodically ~~and averaging the instantaneous workload data to obtain an average workload~~.

17. (currently amended) A computer program product comprising a sequence of processor executable instructions for conserving power in a data processing system including an operating system, processor, memory, and I/O means, the instructions being stored on a computer readable medium, comprising:

~~computer code means for monitoring a workload of the system;~~

instructions of a policy manager module of the operating system for providing a programmable setting enabling a user to specify, as a predetermined performance criterion, a

minimum performance required to be delivered by the data processing system, wherein in the data processing system a workload monitor monitors workload, wherein the monitoring of the workload of the data processing system includes triggering the workload monitoring responsive to an asynchronous event tending to indicate a change in workload, wherein the asynchronous event includes a change in availability of transaction buffers of the data processing system, and wherein a memory of the data processing system is accessed via a bus by respective processors of the data processing system, the accessing being through a memory controller intervening between the processors and the memory, wherein the memory controller provides each processor substantially equal access to the memory such that memory access time may be substantially independent of the respective processors;

~~computer code means for distributing the workload asymmetrically to the processors in the system;~~

~~computer code means~~instructions of the policy manager module for determining a number of processors required to process the monitored workload at a predetermined performance criterion, wherein the determining of the number of processors by the policy manager module comprises:

receiving workload information from the workload module, including a series of workload data points indicating respectively current processor cycles corresponding to loads of the data processing system at respective times in the series;

averaging the series of workload data points to smooth fluctuations in the workload data points, wherein the determining of the number of processors is responsive to the averaged series of workload data points and the predetermined performance criterion;

selecting a processor for activation or deactivation by a resource pool module of the operating system responsive to an increase or decrease of processors indicated by the policy manager, the increase or decrease indication being responsive to the determining of the number of processors by the policy manager module, and wherein the selecting a processor for activation or deactivation includes selecting a particular processor based on the particular processor's workload;

instructions of a resource pool module of the operating system ~~computer code means~~ for activating or deactivating one or more processors to conform the number of active processors in the data processing system to the determined number of processors, wherein the activating or deactivating is initiated by a power control module of the operating system responsive to the selecting by the resource pool module; and

instructions ~~computer code means~~ for processing the workload with the active processors while maintaining the deactivated processors in a reduced power state~~., wherein the code means for deactivating a processor includes code means for selecting a processor for deactivation based on the processor's workload.~~

18. (currently amended) The computer program product of claim 17, wherein the ~~code means~~ instructions for determining the number of processors required comprises ~~code means~~ instructions for determining the minimum number of processors required to achieve the performance criterion.

19. (canceled)

20. (previously presented) The computer program product of claim 17, wherein the ~~code means~~ instructions for deactivating a processor includes ~~code means~~ instructions for migrating processes running on a processor selected for deactivation to another processor.

21. (currently amended) The computer program product of claim 20, wherein the ~~code means~~ instructions for deactivating a processor further includes ~~code means~~ instructions for flushing the processor's cache memory before deactivating the processor.

22. (currently amended) The computer program product of claim 17, wherein the ~~code means~~ instructions for deactivating a processor comprises ~~code means~~ instructions for transitioning a processor to the lowest power state supported by the processor.

23. (currently amended) The computer program product of claim 17, wherein the ~~code means~~ instructions for monitoring the workload comprises ~~code means~~ instructions for determining the demand for CPU cycles.

24. (currently amended) The computer program product of claim 23, wherein the ~~code means~~ instructions for monitoring the workload includes ~~code means~~ instructions for determining ~~the~~ instantaneous workload periodically ~~and averaging the instantaneous workload data to obtain an average workload~~.

25-27. (canceled)